

Devices and methods for processing data transmission units (DTUs) that are either entering or exiting a network. A device having multiple processor modules is provided along with a controller and an interface for the multiple processors. Each processor can work on any one of the connection levels and can independently process incoming or outgoing DTUS. Each processor module can perform the required calculations and data manipulation required for BIP 8 calculation, binning, and trail trace identifier validation. The controller receives the incoming or outgoing DTUS and assigns these DTUS to the appropriate processor module that is working on that connection. Connections can be added or dropped as required by the controller which also handles the assignment of the processor modules to the connections. Furthermore, also provided is an offset scheme for the numbering of the connection levels that avoids a zero connection level that may arise due to an AIS event.